Aging Demographic Shift Amid Economic Expansion

The Thomas Jefferson Institute for Public Policy

Virginia Economic Forecast 2005-06

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The Thomas Jefferson Institute for Public Policy

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Foreward

The Thomas Jefferson Institute for Public Policy is pleased to present its fifth annual report on the economies of the United States and Virginia. Part of the foundation's effort is to offer credible views and data to our state leaders to assist them in preparing for Virginia's future.

This year's annual *Virginia Economic Forecast* was again researched and written by Dr. Christine Chmura and her team of top economists at Chmura Economics & Analytics (CEA) in Richmond. Dr. Chmura opened this firm after serving as Chief Economist at Crestar Bank before it was purchased by SunTrust. This company has grown into a leading member of its industry. Over thirty years of experience is housed in this economic consulting firm specializing in quantitative research, traditional economics and workforce and economic development.

"Virginia Economic Forecast: 2005 – 2006" is made available to our state's elected leaders, business leaders and the media in order to assist them in better understanding the economic reality facing our state. This year's edition, titled *Aging Demographic Shift Amid Economic Expansion* makes it clear that the country and Virginia continue in an economic growth pattern. This year's *Economic Forecast* also points out that, historically, the current expansion is now in its second half. And this year's report also indicates that the price of oil is impacting our economy and will continue to do so if the prices remain high or go higher.

Last year's *Virginia Economic Forecast* anticipated a strong acceleration in economic activity. Although strong growth indeed occurred, it was not as strong as predicted. Again, oil prices were much higher than anyone predicted a year ago and that impacted the economy. In 2004, real gross domestic product expanded at a 4.4% pace, compared with CEA's forecast of 4.9%. CEA forecast last year called for consumer spending to increase at 4.1%, and it actually grew by 3.8%. Residential investment was forecast to grow at 6.1% and in 2004 the growth was 9.7%. Nonresidential spending grew by 10.6% when it was predicted to grow at 11.0%. The predictions were very accurate when the oil price surge is taken into account.

We once again thank SunTrust for sponsoring this year's ***"Virginia Economic Forecast: 2005 – 2006."*** Nothing in this report should be construed as supporting or opposing any legislation and is the opinion of the authors and not necessarily that of the Thomas Jefferson Institute, its Board of Directors, or SunTrust as the sponsor of this report.

Michael W. Thompson
Chairman and President
Thomas Jefferson Institute for Public Policy
May 2005

In the Nation…

- The economic expansion continued to progress as of early 2005; however, the pace of growth has slowed in some respects. After advancing 4.4% in 2004, real gross domestic product (GDP) increased an annualized 3.1% in the first quarter of 2005. The pace of growth in some sectors such as retail and manufacturing have decelerated, which is a normal development during a maturing expansion.

- Healthy economic activity is forecast for 2005 and 2006 but the pace of growth will likely be slower than the 4.4% growth posted in 2004. Although increased spending in software, equipment, and buildings is anticipated from the business sector, a modest slowdown in spending by consumers is expected to hold growth in real GDP to 3.4% in 2005 and 3.0% in 2006.

- Given the steady economic growth projected over the next year, Chmura Economics & Analytics (CEA) expects the Federal Open Market Committee to continue its procession of 25 basis point hikes to its key short term interest rate—the federal funds rate. Although some indicators have pointed towards creeping inflation pressures, the moderate economic growth should keep a lid on accelerating inflation. CEA forecasts show consumer inflation rising 2.9% in 2005 and 2.2% in 2006. The federal funds rate target is anticipated to settle at 4.25% by the end of 2005 and to rise further to 4.50% in 2006.

- Changing demographics and increased life expectancy puts the long-term solvency of the Social Security system in jeopardy. With the nation's population growth rate expected to slow in the foreseeable future, each generation will support a larger retired population. That fact along with increased life expectancy will cause payouts to grow faster than tax revenues. The trustees of the Social Security fund have reported that projected tax income will begin to fall short of outlays in 2017, and the Social Security trust fund will be exhausted by 2041.

In Virginia…

- Virginia's economic performance continues to exceed the national average for a variety of measures. Employment in the state increased 2.6% for the year ending with February 2005 compared with 1.8% in the nation. As job prospects improved, so did the income received by Virginians. For the year ending with the 3rd quarter of 2004, real personal income increased 3.3% in Virginia while advancing 2.4% in the United States.

- On the regional level, the state has 3 new metropolitan areas. While Northern Virginia added the most jobs for the year ending with February 2005, one of the new metro areas—Blacksburg—was the 3rd fastest growing metro area in the country with a +9.7% gain in jobs over the same period. The two other new metro areas (Harrisonburg and Winchester) added jobs at a faster pace than the state average. All metro areas, with the exception of Danville, enjoyed added jobs over the last year.

- While Virginia's growth is expected to remain strong over the next couple of years, the state's labor market will soon be facing the same demographic changes that will affect the national economy. Specifically, the aging of Virginia's workforce—a development already in progress—will start to affect supply and demand conditions in the labor market as baby boomers enter retirement. The industries in Virginia that rely most heavily on this experienced group of workers are educational services, utilities, manufacturing, and health care.

A Maturing Expansion

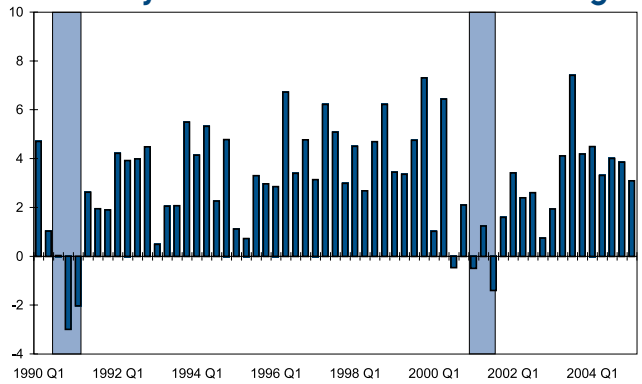
The national economic expansion is 40 months old or 77% complete if the length of the current expansion replicates the average of the peacetime expansions since 1945. Of course, expansions vary in length as do the drivers of growth. As the current expansion continues to mature, real gross domestic product (GDP), the broadest indicator of economic activity, progressed at a solid 3.8% annualized rate in the fourth quarter of 2004. First quarter real GDP grew an annualized 3.1% indicating the economy continues to expand at a healthy pace.

Real GDP grew 4.4% in 2004 after posting 3.0% growth in 2003. The major contributors to growth in 2004 were consumer spending (personal consumption expenditures) and business investment. Consumer spending, which makes up about two-thirds of GDP, increased 3.8% in 2004 after expanding 3.3% in 2003. Business investment (equipment, software, and structures) advanced a strong 10.6% in 2004 after growing only 3.3% in the prior year. Within business investment, spending on equipment and software was particularly strong—growing an annualized 13.6% in 2004.

With overall real GDP increasing at a healthy pace, it is not surprising to see solid activity in the industrial sector. Industrial production, which measures output at factories, mines, and utilities, increased a firm 3.5% over the 12 months ending with February 2005. While these industries are growing, the pace of activity has decelerated. After first posting positive year-over-year growth in October 2003, industrial production eventually jumped to a 5.4% annual pace in May 2004 before easing to the current 3.5%.

Similarly, the Institute for Supply Management (ISM) index points to continued expansion in the manufacturing sector—albeit at a more moderate rate than that in mid-2004. The ISM index, which measures the breadth of growth and the number of firms expanding, rose to a strong 63.6 in January 2004 but has since steadily fallen. As of February 2005, the ISM index stood at 55.3. Despite the decline, the above-50 level indicates a growing manufacturing sector.

Real Gross Domestic Product
Quarterly Annualized Percent Change*



Source: Bureau of Economic Analysis.

Although the pace of activity has eased in the industrial sectors, strong business spending on equipment and software has continued to support sales in high-tech industries. The production of computers, communication equipment, and semiconductors (which represents high-tech activities) increased at a 20.6% year-over-year pace as of February 2005 compared with 3.5% in overall industrial production.

As is typical in a maturing expansion, previously unused resources are being put back to work. This is especially evident in the manufacturing sector where capacity utilization continued to rise from a recent low of 74.6% in April 2003 to 79.4% in February 2005 as firms use more of their idle plant and equipment in response to sustained demand for their products. At this point, however, capacity usage is not so high that it is causing pricing pressures.

Increasing capacity utilization along with a recent slowdown in productivity has supported growth in the labor market. This occurs because more workers are needed to meet increasing demand for factory goods. However, the newest hires are not as productive as experienced employees during their training period so the pace of productivity slows. For the year ending with February 2005, the economy added 2.4 million jobs and reached its fastest pace of year-over-year job growth (+1.8%) since September 2000. Additionally, employment in the nation finally surpassed the pre-recession employment peak of 132.5 million in January 2005 when employment reached 132.6 million.

* Note: Recession periods are shaded in charts throughout the publication.

LOOKING AHEAD

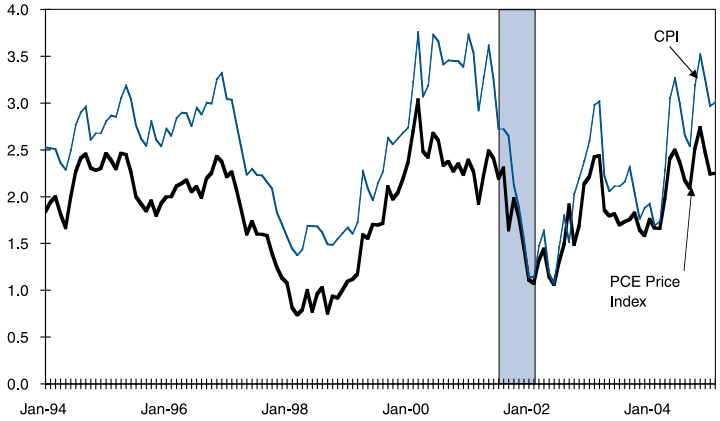
Monetary Policy

The Federal Open Market Committee (FOMC), which is charged with promoting full employment while containing inflation, increased its target on the federal funds rate by 25 basis points at each of its 8 meetings since June 2004. With inflation low and economic activity expanding, Federal Reserve policymakers stated in their March 22 press release that interest rates could increase at a "measured" pace. The financial markets have been translating this language into the expectation of an additional 25 basis point increase in the federal funds target at each of the five remaining meetings in 2005.

The measured changes in monetary policy are understandable because inflation inched up slowly over the last year. The consumer price index (CPI) measured annual inflation at 1.7% in February 2004 and is now showing inflation on the order of 3.0% (February 2005). Similarly, inflation measured by the producer price index (PPI) increased from 2.1% in February 2004 to 4.7% in February 2005. However, the FOMC's preferred inflation yardstick, personal consumption expenditures (PCE), indicates that inflation remains under control at a 2.3% yearly increase in February 2005.

Forward-looking indicators, however, suggest a potential acceleration in inflation. Although price pressures from the labor market have been relatively calm as average hourly earnings increased only 2.5% for the year ending with February 2005, continuing job growth coupled with lower productivity could result in higher final product prices. Commodity prices also indicate an acceleration in inflation. From January through March 2005, commodity prices rose 10% while the price of crude oil jumped 21%.[1] These trends along with the Federal Reserve's *Beige Book*[2] comments that businesses are finding it easier to pass along costs have increased fears that inflation will accelerate.[3]

PCE Chain Type Price Index & CPI
% Change From Year Ago



Source: Bureau of Labor Statistics and Bureau of Economic Analysis.

Economic Forecast

With inflation picking up slightly and economic growth expected to continue at a healthy pace, Chmura Economics & Analytics (CEA) forecasts the FOMC to increase the federal funds rate target by 25 basis points at each of its five remaining meetings in 2005. As a result, the funds rate will rise to 4.25% in December 2005. CEA further expects the FOMC to continue raising the federal funds rate until it reaches a more neutral level of about 4.5%.[4]

CEA's forecast for monetary policy assumes that real GDP continues to grow at a moderate rate. Quarterly annualized real GDP slowed in the first quarter to 3.1% as higher gasoline prices dampened consumer spending. CEA assumes that oil prices fall from an average $50 a barrel in the first quarter of 2005 to about $45 a barrel in the fourth quarter of 2005. As a result, the pace of growth accelerates over the remainder of the year with real GDP growing 3.4% in 2005 and easing to 3.0% in 2006.

The greatest risk to the forecast shown here is the possibility of sustained high oil prices. Oil prices have been fairly volatile, recently hovering above $55 per barrel.[5] CEA assumes that oil prices fall from an average $50 a barrel in

[1] Commodity prices measured using the Reuters CRB commodities price index for the weeks ending January 7, 2005 and March 25, 2005.

[2] The *Beige Book*, published eight times per year, contains anecdotal information on current economic conditions in the nation. Information is gathered by each of the twelve Federal Reserve District banks. Sources include interviews with key business contacts, economists, and market experts.

[3] Federal Reserve System Beige Book, March 9, 2005 report.

[4] The neutral federal funds rate is one that neither stimulates nor slows economic growth. When the federal funds rate is below the neutral rate, then too much liquidity encourages increased spending which could cause the inflation rate to rise. Public statements by Federal Reserve officials have placed the neutral federal funds rate between 3.5% and 5.5%. Varying approaches are used to estimate the neutral rate. One is to add the long-run potential GDP rate to targeted inflation. The Congressional Budget office has estimated potential GDP of about 3.0%. Adding to that an inflation rate of about 2.0% puts the neutral rate at 5%. However, taking into account the risk premium of an upwardly sloping yield curve puts the neutral federal funds lower than 5.0%.

[5] Even though oil prices have risen considerably over the last year, they remain below the inflation-adjusted peak of $90 a barrel set in 1980.

the first quarter of 2005 to about $45 a barrel in the fourth quarter of 2005. An alternative forecast assumes that oil rises to $90 and remains at that level. Under this scenario, real GDP grows 3.1% in 2005 and 2.5% in 2006 as consumers cut back spending more than under the most-likely scenario which is presented in this publication.

National Forecast Summary

	Actual	Forecast		
	2004	2005	2006	2007
	Percent Change			
Gross Domestic Product	4.4	3.4	3.0	3.6
Personal Consumption Expenditures	3.8	3.3	2.8	3.1
Residential	9.7	2.9	-0.9	1.6
Nonresidential	10.6	11.0	5.4	3.7
Equipment & Software	13.6	13.6	6.4	4.6
Government Expenditures	2.0	1.1	1.2	1.6
	Trade Deficit (Billions of Dollars)			
Net Exports, Goods & Services	-583.9	-658.7	-604.5	-549.2
	Percent Change			
Consumer Price Index	2.7	2.9	2.2	1.7
	Yields (%)			
Federal Funds Rate	1.3	3.2	4.4	4.5
Prime Rate	4.3	6.2	7.4	7.5
10-Year Treasury	4.3	4.8	5.4	5.5
30-Year Fixed Mortgage	5.8	6.4	7.0	7.1

Note: Yields reported as the average of the year.

Source: Chmura Economics & Analytics.

Social Security Reform and the Economy

Since the Great Depression, Social Security has provided generations of Americans with guaranteed income for their retirement. The current system employs a 'pay-as-you-go' mechanism, with payroll tax on workers supporting the retired seniors. When the working population is growing, a larger number of workers support a smaller number of retirees. In this case, the Social Security system pays out less than it takes in, and the surplus is used to build a trust fund.

During the 1950s and 1960s, Social Security's trust fund increased because the number of workers outnumbered those in retirement. Based on the most recent Social Security trustee report,[6] the Social Security and Medicare trust funds accumulated an asset value of $1.95 trillion at the end of 2004.[7]

However, changing demographics and increased life expectancy puts the long-term solvency of the Social Security system in jeopardy. The current 'pay-as-you-go' system will run smoothly only when the emerging workforce is growing fast enough to cover retirees. When there are generational imbalances in population, social security will run into either surplus or deficit. Like many other industrial nations, the birth rate in the United States is slowing. Assuming this demographic trend continues, the nation's population growth rate is expected to slow in the foreseeable future. As a result, each generation will support a larger retired population. In addition, life expectancy increased steadily from 75.4 years in 1990 to 75.8 in 1995 and 77.3 in 2002.[8] These two forces will cause payouts to grow faster than tax revenues. In fact, the trustees of the Social Security fund have reported that projected tax income will begin to fall short of outlays in 2017, and the Social Security trust fund will be exhausted by 2041.[9]

Under the current 'pay-as-you-go' system, several options have been set forth to extend the solvency of the Social Security system. For example, some economists propose increasing the retirement age over 67 and adjusting it based on life expectancy or bringing the 23 million government workers into the Social Security system. Another option is to index the Social Security benefit on prices rather than wages, and increasing the maximum income that is subject to Social Security taxes.[10] Although these changes can extend the solvency of Social Security system for a period of time, they will not solve the fundamental imbalance of the 'pay-as-you-go' system.

[6] Each year, Trustees of the Social Security and Medicare trust funds report on the current status and projected condition of the funs over the next 75 years. The 2005 Annual report can be found at: http://www.ssa.gov/OACT/TR/index.html

[7] There are four separate trust funds included in the social security and Medicare trust fund: Old-Age and Survivors Insurance Trust Fund, Disability Insurance Trust Fund, Hospital Insurance Trust Fund, and Supplementary Medical Insurance Trust Fund.

[8] Source: US Department of Health and Human Service, http://www.cdc.gov/nchs/data/hus/hus04trend.pdf#027

[9] Source: Social Security Trustee Annual Report 2005.

[10] See "Social Security and Medicare: No Free Lunch" by Jason Saving and Alan Viard, Southwest Economy, Federal Reserve Bank of Dallas.

A more fundamental policy change is to set up personal savings accounts for retirement. In this case, each worker saves for his or her own retirement. On the positive side, this system will not be affected by fluctuations in the population because retirees' benefits are limited to what they saved during their careers. Some economists have argued that this is one option that can ensure the solvency of the system for centuries to come, while every worker saves for his or her own retirement.[11]

If personal savings accounts are implemented, then part of the employee's payroll tax deduction is saved in an account that can only be withdrawn after retirement. Some economists have argued that the government needs to be actively involved in this system for it to be successful. For example, there will likely be a required percentage of payroll deductions as well as restrictions on when the money can be withdrawn. Also, the account may be restricted to long-term returns, to avoid short-term speculation that could lead to large losses.

An enormous cost is associated with changing from a 'pay-as-you go' system to a 'save-for-own-retirement' system. That cost is essentially the question of who will pay for the one generation that has supported its parents and now is at the retirement age expecting to be supported by the younger generations? One report by the Brookings Institution estimates that President Bush's Social Security reform plan will incur public debt of $1 trillion during the first decade it is in effect and $3.5 trillion during its second decade.[12] An editorial in the *Washington Post* put the cost of reform at a smaller $2 trillion dollars.[13]

Several options have been suggested to fund a 'save-for-own-retirement' proposal. All of them fall to the two sides of an accounting equation: increase the revenue for Social Security, or cut the expenses via the benefits paid to retirees. The economic ramifications of these proposals can be very different. As with every economic policy change, there will be winners and losers, regardless of what actions are taken. The following analysis discusses the impact of hypothetical funding strategies on the U.S. economy.

Though no plan has called for cutting benefits for current or future retirees, should such a measure occur, it will affect economic sectors differently. Cutting benefits for retirees

[11] See "Social Security and Medicare: No Free Lunch" by Jason Saving and Alan Viard, Southwest Economy, Federal Reserve Bank of Dallas.

[12] Source: Testimony by Peter Orszag of the Brookings Institution at the House Committee on the Budget. February 9, 2005. http://www.brook.edu/views/testimony/orszag/20050209.htm.

[13] Source: The Cost of Reform, the Editorial of Washington Post, December 6, 2004.

will decrease the disposable income of seniors. Social Security benefits account for over 50% of the income of 64% of seniors (65 years and older). Further, almost one third of seniors draw over 90% of their income from Social Security.[14]

Based on a 2002 consumer expenditure survey by the U.S. Census, seniors spent 12.8% of their income on health care, compared with 5.8% for consumers of all ages. The negative impact of benefit cutting on the health care industry is self-evident. Another sector that could also suffer disproportionately is charitable and non-profit organizations. The same survey showed that in 2002, seniors (65 and above) spent 6% of their total expenditures on cash contributions, compared to 3.1% for consumers of all ages.

Should payroll taxes be increased to fund the Social Security reform, it would have a different effect as the burden of reform would fall on the labor force. Compared with seniors, workers spend a higher percentage of disposable income on education and insurance. Workers between the ages of 25 and 65 spend 1.7% of their expenses on education, compared with 0.7% for seniors. Similarly, people in the labor force spend 10.6% of their disposable income on insurance compared with 4.6% for seniors. Some other sectors that are likely to be affected more than others when younger generations bear the cost of Social Security reform are entertainment and to a lesser degree, apparel and services.

Raising taxes and cutting benefits will reduce disposable income and affect consumer expenditures directly. Another option discussed by economists and policy makers is to fund the personal retirement account through borrowing. While borrowing means American taxpayers will pay a larger sum than the transitional cost itself (principle plus interest), the cost can be spread over a longer period of time, thus reducing the negative impact on a single generation of workers or retirees. However, borrowing would have a broader economic effect, by putting upward pressure on interest rates.

One study[15] estimates that borrowing monies would amount to $1 trillion in the first decade under the Bush plan and $3.5 trillion during the second decade. Another study put the borrowing amount at $754 billion (including interest) over 10 years.[16] Borrowing with such magnitude could have a sizable impact on financial markets and interest rates because increased borrowing will raise the demand for capital in the financial market or even crowd out private investment. Interest rates tend to increase when demand rises. In addition, this could have an impact on the international financial market, exchange rates, and the trade deficit, as many of the U.S. debts will be purchased by foreign investors and governments. If foreign governments and corporations are reluctant to purchase U.S. debts, the exchange rate for the dollar tends to fall.

Realistically, whatever proposal emerges from the debate will probably incorporate some components of the above options. Those options include payroll tax increases, federal borrowing, benefits cuts, and extending the eligibility age.

Recognizing that fundamentally changing the 'pay as you go' system is one option for the long-term solvency of the Social Security system, personal retirement accounts will also likely be included, even partially at the initial stage to ease the transition.

[14] Source: Income of the Aged Chartbook, 2000, A Survey by Social Security Administration. http://www.ssa.gov/policy/docs/chartbooks/income_aged/2000/iac00.html#income.

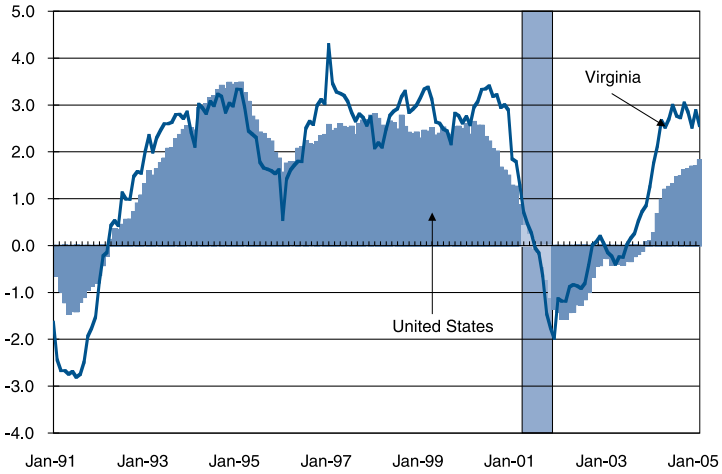
[15] Source: Testimony by Peter Orszag of the Brookings Institution at the House Committee on the Budget. February 9, 2005. http://www.brook.edu/views/testimony/orszag/20050209.htm.

[16] Source: Bold and Responsible: The President's Plan to Improve Retirement Security, by David John of the Heritage Foundation. http://www.heritage.org/Research/SocialSecurity/wm650.cfm. This paper only provides the borrowing cost of the first 10 years of the plan.

Characteristics of Virginia's economy—whether regional in nature or applicable to the entire state—have contributed to the robust expansion. Since July 2003, year-over-year employment growth in the Commonwealth has outpaced the national rate. While the state economy is positioned to continue to expand over the near-term, longer-term demographic changes impacting the labor market pose challenges at both the local and national level.

Employment Growth

Percentage Change From A Year Ago



Source: Bureau of Labor Statistics.

Most sectors of the Virginia economy are growing at a pace much faster than the national rate. Virginia's economy is expected to remain strong over the forecast period but national growth will continue to accelerate and will approach the state's pace. After growing 2.5% in 2004, employment in the state is expected to advance 2.2% in 2005 and 2.0% in 2006. Employment and wages are forecast to increase for all the state metro areas over the next two years. Activity is also expected to remain strong in the retail sector although some slowing in the housing market (from historically high levels) is projected.

Recent Growth

Employment in Virginia continues to advance at a faster rate than the national average. For the year ending with February 2005, employment in the state rose 2.6% (91,000 jobs) compared with 1.8% nationally. Among the states, Virginia was the 10th fastest growing in that 12-month period.

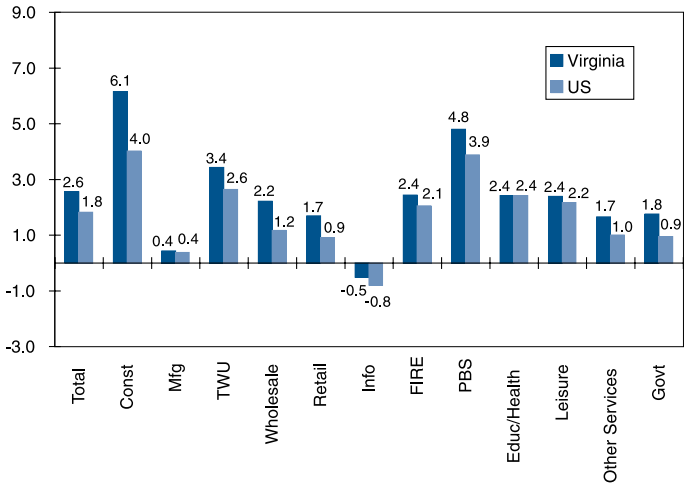
The Commonwealth recovered the jobs lost during and after the 2001 recession by March 2004, whereas employment in the nation didn't reach that threshold until January 2005. The importance of security and defense spending in Virginia was one factor that spurred its growth. The Department of Defense is the largest employer in the state and Northrop Grumman Newport News (shipbuilding) is the fourth largest employer.

Over the 12 months ending with February 2005, new job creation was distributed across most industry sectors. 11 of the 12 major industry sectors increased payrolls in Virginia and all 12 grew as fast or faster than its national counterpart. Only the stalling information sector, with a drop of 0.5% (-512 jobs) contracted. In fact, the information sector was the only sector in the nation to shed jobs over the last 12 months.

The fastest pace of job growth occurred in the construction sector which expanded 6.1% for the year ending with February 2005 (+13,863 jobs). Strong home building in the state boosted this sector. Next to construction, professional and business services (PBS) grew 4.8% over the last 12 months and added the largest number of jobs—27,135. The professional and business services sector includes firms in architecture, engineering, and legal services, as well as administrative and business support services. Within this sector, business services related to architecture, engineering, and computer systems design accounted for the largest amount of the job growth. At a 3.4% pace, transportation, warehousing, and utilities (TWU) is the other industry posting better-than-average job growth in the 12 months ending with February 2005.

Just as employment grew in most major industry sectors over 2004, it also increased in almost all of the state's metropolitan areas. The only metropolitan area shedding jobs was Danville, which contracted by 1.9% (800 jobs) over the 12 months ending with Feburary 2005. Beginning with January 2005, 3 new metro areas have been identified in the state: Blacksburg (+9.7%), Harrisonburg (+2.8%), and Winchester (+3.1%) each grew faster than the state average for the 12 months ending with February 2005.

Employment Growth by Sector
Percentage Change from a Year Ago, Feb. 2005



Source: Bureau of Labor Statistics.

Top 10 Employers, Third Quarter 2004

Greater than 10,000 Employees

1. Department of Defense
2. Wal-Mart Associates Inc.
3. Northrop Grumman
4. Fairfax County Public Schools
5. Food Lion LLC
6. County of Fairfax
7. U.S. Postal Service
8. Sentara Health System
9. Virginia Beach School Board
10. University of Virginia

Source: Chmura Economics & Analytics and Virginia Employment Commission.

The Northern Virginia metro area was the second fastest growing in the state behind Blacksburg. Employment expanded 5.0%, or by 60,499 jobs in Northern Virginia for the year ending with February 2005–creating 67% of all new jobs in Virginia. Similar to the state, construction firms posted the fastest pace of growth at 7.9% or 6,548 jobs. Also, professional business services increased by the largest amount with 17,471 jobs or a gain of 5.9%.

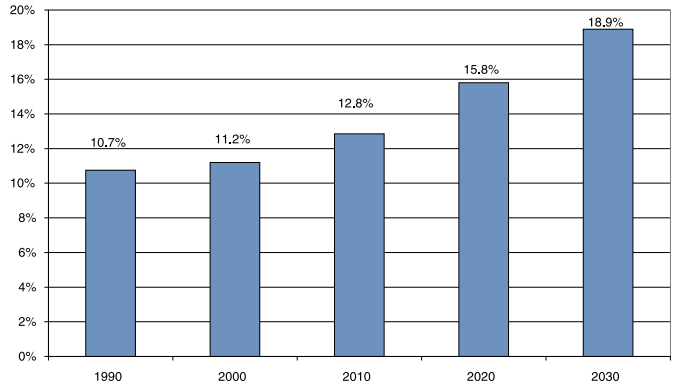
Employment in Roanoke increased 2.6%, Richmond advanced 2.0%, Charlottesville grew 1.5%, Hampton Roads grew 1.6%, Bristol increased 0.9% (which includes counties in Tennessee), and Lynchburg was essentially unchanged with a scant 0.1% gain.

Aging and the Virginia Workforce

The aging workforce and enlarging pool of retirees is affecting Virginia as it is the nation. According to the Virginia Employment Commission (VEC), the 65 years and older age cohort made up 11.2% of Virginia's total population in 2000. In 2010 that proportion is expected to be 12.8% and 18.9% of the total population in 2030.

The age distribution of Virginia's workers provides a backdrop to consider future workforce issues. The following chart depicts the percentage of workers from several age cohorts. Workers between the ages of 35 through 44 account for the largest share of Virginia's actively employed workers (26%). As time progresses, that aging cohort will start to push up the proportion of retirees compared with the total population.

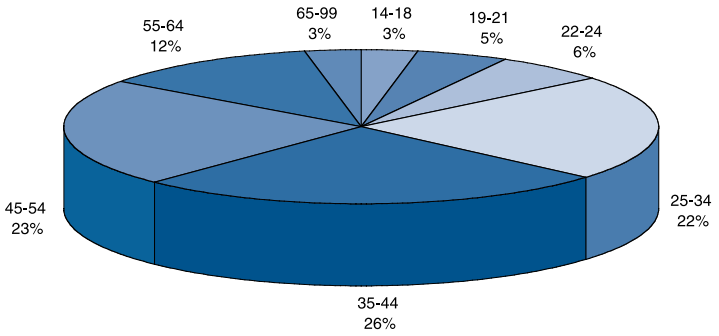
Percent of Virginia's Population Aged 65 Years and Older



Source: Virginia Employment Commission.

The age-stratified perspective of the labor market at the industry level provides more insights for strategic economic and workforce development. In general, industries employing a larger share of older workers will potentially have more difficulty retaining a sufficiently skilled workforce as the more productive older workers retire and are replaced by younger workers with less experience. The following table ranks industries in terms of the percentage

Age Distribution of Virginia Workers
2003Q4



Source: U.S. Census Bureau, Local Employment Dynamics Program.

of its workers that are between the ages of 45 and 64.[17] A significant variation exists between industries in their reliance on older workers. Educational services is the industry with the largest percentage of older workers with 49.3% of its workers aged 45 through 64—substantially higher than the state average of 34.6% for all industries. On the other hand, the accommodation and food services industry is least reliant on older workers as only 17.8% of employees in this industry are aged 45 through 64.

Based solely on demographic changes, more younger people need to be trained to work in industries such as educational services, utilities, manufacturing, and health care. While other factors will influence the expected job openings in a given industry, the aging workforce is likely to have more acute effects in these industries than others.[18] Taken a step further, the top occupations in these industries identify the skills that will be needed.

Not surprisingly, teachers are overwhelmingly the most predominant occupation in the educational services industry. In the utilities industry, the largest occupation is electrical power line installers and repairers followed by customer service representatives and meter readers. In manufacturing, the top occupations are team assemblers, first-line supervisors, and hand laborers while the top occupations in health care are registered nurses, other nurses, and home health aides. The market system can expect to correct the problem, as labor shortages will raise wages and attract more people to the field. Other measures ranging from education and workforce development can better prepare Virginia for the challenge.

[17] Data are from the Local Employment Dynamics Program of the U.S. Census Bureau for the 4th quarter of 2003.

[18] This conclusion is based on the assumption of current retirement age of 65. Should the retirement age increased, or indexed on life expectancy, the impact of aging workforce can be less severe.

Percent of Industry Workers Aged 45-64 Years

Industry	% of Total
Educational Services	49.3%
Utilities	47.5%
Public Administration	44.7%
Manufacturing	42.6%
Health Care and Social Assistance	38.6%
Management of Companies and Enterprises	37.9%
Transportation and Warehousing	37.7%
Wholesale Trade	36.3%
Other Services (except Public Administration)	35.3%
Professional, Scientific, and Technical Services	34.1%
Agriculture, Forestry, Fishing, and Hunting	33.6%
Real Estate and Rental and Leasing	32.6%
Construction	31.7%
Finance and Insurance	31.2%
Information	30.1%
Arts, Entertainment, and Recreation	28.8%
Administrative Support / Waste Management / Remediation Services	28.8%
Retail Trade	28.3%
Accomodation and Food Services	17.8%
All Industries	**34.6%**

Source: U.S. Census Bureau, Local Employment Dynamics Program.

Technology

As the national expansion continues, employment in high-tech industries in Virginia is once again growing faster than overall employment. For the year ending with the 3rd quarter of 2004 (the latest data available), high-tech employment advanced 4.9% or by 21,000 jobs in Virginia compared with 2.6% growth in total employment.

The state's two largest high-tech sectors–architectural, engineering, and related services and computer systems design and related services—added most to the high-tech payrolls–over 13,000 jobs for the year ending with the third quarter of 2004. The architecture and engineering sector also led the high-tech sectors in terms of percentage gains with a 14.0% increase. Other industries that have grown at a fast pace include management, scientific, and technical consulting services (11.3%), and navigational, measuring, electromedical, and control instruments manufacturing (8.8%).

High-Technology Growth in Virginia

NAICS	Industry	Employment				Wages and Salaries Thousands of Dollars*			
		2003Q3	2004Q3	Change	% Change	2003Q3	2004Q3	Change	% Change
Total Employment		**3,405,919**	**3,501,800**	**95,881**	**2.8**	**32,115,857**	**34,544,799**	**2,428.942**	**7.6**
Total High Technology		**429,359**	**450,287**	**20,928**	**4.9**	**7,077,585**	**7,710,182**	**632,597**	**8.9**
3251	Basic Chemical Manufacturing	1,623	1,495	-127	-7.8	24,103	23,113	-990	-4.1
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	7,613	7,133	-480	-6.3	105,456	106,263	807	0.8
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	379	345	-34	-9.0	3,081	2,983	-97	-3.2
3254	Pharmaceutical and Medicine Manufacturing	3,847	3,857	10	0.3	59,110	57,034	-2,075	-3.5
3255	Paint, Coating, and Adhesive Manufacturing	886	854	-32	-3.6	10,360	10,981	620	6.0
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	1,262	1,302	39	3.1	13,351	14,558	1,207	9.0
3259	Other Chemical Product and Preparation Manufacturing	2,513	2,499	-14	-0.6	26,941	26,908	-33	-0.1
3331	Agriculture, Construction, and Mining Machinery Manufacturing	1,868	1,877	10	0.5	19,055	20,062	1,007	5.3
3332	Industrial Machinery Manufacturing	2,269	2,221	-48	-2.1	25,029	24,698	-330	-1.3
3333	Commercial and Service Industry Machinery Manufacturing	2,602	2,662	60	2.3	35,687	39,228	3,541	9.9
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	5,164	4,823	-341	-6.6	46,388	43,894	-2,494	-5.4
3335	Metalworking Machinery Manufacturing	1,506	1,493	-13	-0.9	14,336	15,154	818	5.7
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	1,125	1,132	7	0.6	16,365	15,382	-982	-6.0
3339	Other General Purpose Machinery Manufacturing	4,070	4,387	318	7.8	43,377	48,346	4,969	11.5
3341	Computer and Peripheral Equipment Manufacturing	2,543	1,853	-690	-27.1	26,700	19,606	-7,093	-26.6
3342	Communications Equipment Manufacturing	2,950	2,591	-359	-12.2	50,771	46,336	-4,435	-8.7
3343	Audio and Video Equipment Manufacturing	79	73	-6	-7.6	705	707	1	0.3
3344	Semiconductor and Other Electronic Component Manufacturing	5,276	5,360	85	1.6	64,988	69,540	4,552	7.0
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	5,262	5,725	464	8.8	75,516	86,639	11,123	14.7
3346	Manufacturing and Reproducing Magnetic and Optical Media	169	167	-2	-1.4	2,459	2,835	376	15.3
3363	Motor Vehicle Parts Manufacturing	8,719	8,858	139	1.6	80,649	84,140	3,491	4.3
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	16,795	16,881	86	0.5	318,793	344,764	25,971	8.1
4236	Electrical and Electronic Goods Merchant Wholesalers	7,064	6,819	-245	-3.5	104,857	107,413	2,555	2.4
4431	Electronics and Appliance Stores	13,229	13,953	725	5.5	113,695	118,588	4,893	4.3
5112	Software Publishers	9,006	8,656	-350	-3.9	211,084	213,120	2,035	1.0
5152	Cable and Other Subscription Programming	2,978	3,140	162	5.4	27,282	32,339	5,057	18.5
5161	Internet Publishing and Broadcasting	1,397	1,526	130	9.3	21,333	25,015	3,682	17.3
5181	Internet Service Providers and Web Search Portals	10,863	11,154	291	2.7	253,544	320,560	67,016	26.4
5182	Data Processing, Hosting, and Related Services	12,737	12,911	174	1.4	196,481	209,812	13,331	6.8
5191	Other Information Services	5,133	5,245	112	2.2	31,412	33,498	2,085	6.6
5413	Architectural, Engineering, and Related Services	58,386	66,535	8,149	14.0	911,690	1,056,554	144,863	15.9
5414	Specialized Design Services	2,300	2,527	226	9.8	22,708	26,265	3,557	15.7
5415	Computer Systems Design and Related Services	98,964	106,047	7,082	7.2	1,884,190	2,065,506	181,316	9.6
5416	Management, Scientific, and Technical Consulting Services	40,861	45,474	4,612	11.3	716,224	850,478	134,354	18.7
5417	Scientific Research and Development Services	17,446	18,255	808	4.6	318,430	341,442	23,0111	7.2
5511	Management of Companies and Enterprises	70,476	70,460	-16	0.0	1,201,420	1,206,402	4,981	0.4

* Includes some stock options that were exercised. Note: Data in this table include both private and government entities.

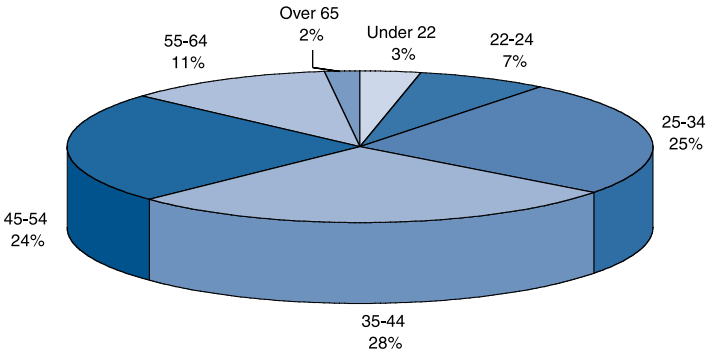
Despite the relatively strong high-tech employment growth in Virginia, there are still a number of smaller high-tech sectors that continue to cut jobs. Out of the 36 high-tech sectors, 14 exhibited declining employment for the year ending with the 3rd quarter of 2004. Faring worst in this regard were computer and peripheral equipment manufacturing (-27.1%) and communications equipment manufacturing (-12.2%).

Labor Market

In addition to the robust job growth in Virginia over the last two years, other measures also paint a healthy picture of the state's labor market. As of January 2005, Virginia's unemployment rate stood at 3.3% compared with 5.2% in the nation. The relatively high 1.9 percentage point differential between the state and national unemployment rates lends further support to the strength of Virginia's labor market. Since 1990, Virginia's unemployment rate has averaged 1.5 percentage points less than the national rate.

Unemployment from an age-stratified perspective can also help to determine which workers are in relatively high or low demand. For example, the following chart shows that the 45 through 54 year age cohort accounted for 24% of the unemployed in Virginia as of December 2004. This proportion is similar to the figures presented earlier which showed this age cohort to represent 23% of Virginia's workers. The similarity between these two proportions indicates that the unemployment rate for workers aged 45 through 54 is likely on par with the state average of 3.3%.

Age Distribution of the Unemployed in Virginia December 2004



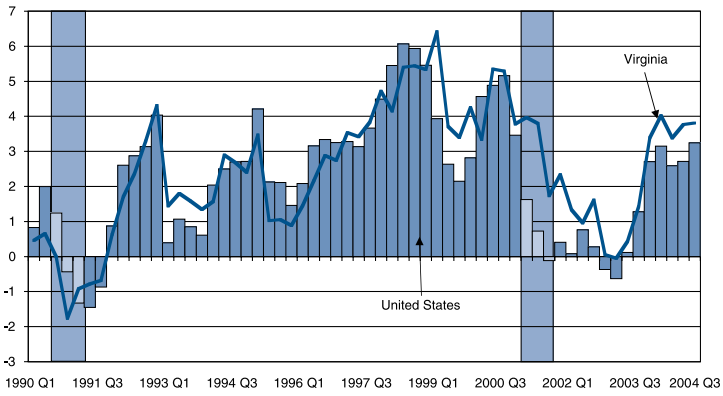
Source: JobsEQ.™

Income

The strong employment growth in Virginia has been accompanied by relatively fast growth in income. For the year ending with the third quarter of 2004, real personal income grew 3.3% in Virginia compared with 2.4% in the nation. Real personal income growth in Virginia exceeded the U.S. average since the first quarter of 2000. The recent pick-up in high-tech jobs has contributed to the relatively faster income growth in state. Over the four quarters ending with the third quarter 2004, for example, 7,082 jobs were created in the computer systems design and related services industry in Virginia that pay an average annual salary of over $75,000.

The proportion of income provided by net earnings continued to rise in the state and nation. Net earnings consist of wage and salary disbursements, other labor income, and proprietor's income. As of the third quarter of 2004, net earnings accounted for 80.0% of personal income while net earnings accounted for 79.4% of personal income a year earlier. Over a longer period, the trend is more noticeable. During the third quarter of 1990, net earnings represented 76.1% of personal income.

Real Personal Income Growth
Percentage Change From A Year Ago

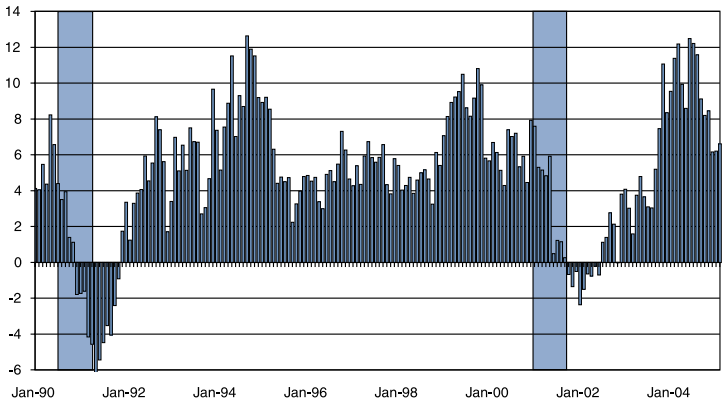


Source: Bureau of Economic Analysis and Bureau of Labor Statistics.

Retail Sales

Consumer spending in Virginia was extremely strong in 2004 but it started to cool to a healthier pace in early 2005.

Virginia Retail Sales
Percentage Change From A Year Ago, 6-Month Moving Average



Source: Virginia Department of Taxation.

For the year ending with January 2005, retail sales in the state grew 6.2% after advancing at a 12.5% pace during the summer of 2004. Spending related to tourism also slowed across the state. Lodging and restaurant sales grew 4.3% for the year ending with January 2005 after growing at a 12.9% pace in early 2004.

Despite the moderation in general retail sales, purchases for big-ticket items are still strong. Auto sales reached a record pace of over 41,000 vehicles in January 2005. Since January 2004, auto sales have advanced 6.1%.

The robust spending that characterized much of 2004 is unlikely to endure; however, steady growth is forecast for 2005 and 2006. In the state, real retail sales are expected to grow 4.8% in 2005 and 4.7% in 2006.

Housing Market

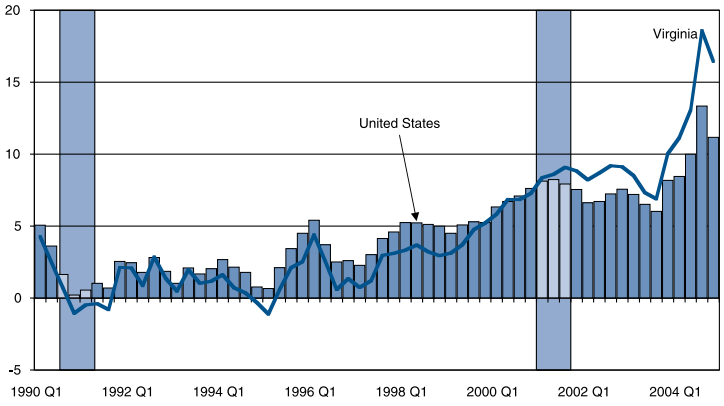
Although short-term interest rates have started to creep higher, mortgage rates have continued to oscillate near a historically-low level. Consequently, the relatively cheap borrowing costs have continued to support the housing market. While rates dipped as low as 5.2% in June 2003, the average interest rate on a 30-year conventional mortgage has held below 6.5% since July 2002. As of mid-April 2005, mortgage rates were approaching 6.0%. CEA forecasts that mortgage rates will rise to 6.6% in the third quarter of 2005, and 6.7% in the fourth quarter of 2005.

The housing market exceeded expectations in 2004 and continued to set new records for home sales and price appreciation. The Virginia Association of Realtors reported an 11% increase in new and existing home sales from 2003 to 2004. In 2004, 137,166 sales were reported compared with 123,084 in 2003.

The acceleration in home prices is consistent with the strong demand. In Virginia, home prices advanced 16.4% for the year ending with the fourth quarter of 2004 according to the Office of Federal Housing Enterprise Oversight (OFHEO) house price index.[19] Price appreciation in the state reached a blistering 19% pace in the third quarter. In comparison, home prices in the nation increased 11.2% for the year ending with the fourth quarter of 2004.

While the housing market is expected to remain strong in Virginia, the level of activity is forecast to slow from its currently high rate. Building permits, which are a leading indicator of housing construction, are forecast to slow to 0.1% in 2005 and -2.9% in 2006 after growing 4.3% in 2004.

Home Price Appreciation
Percentage Change From A Year Ago



Source: Office of Federal Housing Enterprise Oversight.

Metropolitan Areas

All 11 metropolitan areas in the state are forecast to see employment growth in 2005 and 2006. The three new metro areas—Blacksburg, Harrison, and Winchester—are expected to be the fastest growing metro areas in 2005 at 3.7%, 3.6%, and 3.4%, respectively. Not surprisingly, these newly identified metro areas are also expected to see the

[19] The OFHEO house price index is a weighted repeat sales index and therefore is a true measure of price appreciation as it is not affected by changes in the size of quality of homes sold.

fastest growth in building permits. Wage and salary growth are not among the highest forecast, reflecting that these regions have a lower cost of living than other metro areas in the state.

With a forecast of 3.3% employment growth in 2005, Northern Virginia is expected to be the fourth fastest growing metro area in the state. However, its higher cost of living and mix of industries that demand highly skilled workers contributes to its 9.0% expected wages and salary gains in 2005—the fastest growth in the state. Retail sales are also expected to grow faster in Northern Virginia than in any other metro area in the state in 2005.

Charlottesville is the only other metro area aside from the four mentioned above that is forecast to grow faster than the 2.2% employment forecast for the state. Employment in the Charlottesville metro area is forecast to grow a strong 2.8% in 2005. Wage and salary growth in this region is forecast to increase a strong 7.4% while retail sales and building permits both reflect the faster-than-average pace of overall economic activity.

Employment in both Hampton Roads and Richmond is expected to remain fairly stable compared with the previous year. Jobs growth in Hampton Roads is forecast to advance 1.8% in 2005 after growing by the same pace in 2004. Richmond employment is forecast to increase 1.7% in 2005 after expanding 1.5% in 2004.

The four remaining metro areas—Lynchburg, Roanoke, Bristol, and Danville—are forecast to be the four slowest growing areas at 1.3%, 0.7%, 0.6%, and 0.4% employment growth in 2005. Lynchburg continues to struggle since the telecom bust and Roanoke and Bristol both lack drivers of strong growth.

Even though employment in the Danville metro area is expected to see the slowest growth in the state in 2005, that growth represents a strong turnaround from the 2.2% decline in 2004. The Danville Office of Economic Development has announced relocations or expansions totaling 2,000 jobs since March 2004 that will add diversity to the region's dependence on textiles and tobacco. Despite the strong turn around in employment, wages and salaries remain low in the region, reflecting the industry mix.

Virginia Forecast Summary: Most Likely Scenario

Percentage Change From A Year Ago

	Actual			Forecast	
Northern Virginia	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-0.7%	0.2%	4.1%	3.3%	3.3%
Wages and Salaries*	-1.7%	5.0%	10.0%	9.0%	7.2%
Real Retail Sales	-0.7%	5.6%	8.4%	7.4%	5.7%
Building Permits	10.3%	3.1%	0.3%	0.5%	-0.5%
Hampton Roads	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	0.5%	-0.8%	1.8%	1.8%	1.7%
Wages and Salaries*	3.8%	4.9%	5.1%	5.9%	5.6%
Real Retail Sales	1.8%	4.3%	6.5%	4.0%	4.0%
Building Permits	8.8%	2.9%	-3.7%	-1.4%	-2.8%
Richmond	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-0.6%	-0.1%	1.5%	1.7%	1.5%
Wages and Salaries*	1.9%	2.0%	5.7%	5.6%	5.3%
Real Retail Sales	-1.9%	4.2%	6.9%	6.9%	5.4%
Building Permits	9.9%	-4.7%	4.7%	5.7%	2.0%
Roanoke	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-0.6%	-2.9%	0.8%	0.7%	1.0%
Wages and Salaries*	2.8%	0.8%	2.6%	4.7%	4.2%
Real Retail Sales	-1.1%	3.5%	3.3%	3.6%	3.7%
Building Permits	15.2%	-0.5%	4.4%	1.8%	1.0%
Lynchburg	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-1.7%	-2.1%	1.4%	1.3%	0.5%
Wages and Salaries*	-1.3%	1.4%	4.4%	3.8%	2.8%
Real Retail Sales	-7.7%	2.3%	5.4%	4.2%	2.2%
Building Permits	15.1%	15.6%	-3.8%	-3.9%	-4.6%
Charlottesville	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	0.3%	-0.5%	2.8%	2.8%	2.2%
Wages and Salaries*	3.1%	3.8%	6.5%	7.4%	5.9%
Real Retail Sales	0.9%	5.1%	3.8%	5.5%	4.1%
Building Permits	14.1%	-7.9%	10.4%	8.2%	4.3%
Danville	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-0.9%	-0.3%	-2.2%	0.4%	0.8%
Wages and Salaries*	2.2%	1.1%	3.2%	3.8%	2.9%
Real Retail Sales	0.3%	-1.6%	1.8%	2.9%	1.8%
Building Permits	14.2%	-17.1%	2.0%	-2.0%	-5.1%
Bristol	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-1.2%	0.4%	-1.1%	0.6%	0.3%
Wages and Salaries*	-1.8%	5.9%	1.8%	5.7%	2.9%
Real Retail Sales	0.0%	1.8%	2.2%	2.5%	2.2%
Building Permits	7.8%	4.3%	18.2%	10.2%	6.5%
Harrisonburg	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	2.5%	1.3%	2.5%	3.6%	2.6%
Wages and Salaries*	1.7%	4.2%	5.0%	7.4%	4.9%
Real Retail Sales	0.6%	4.9%	9.6%	5.3%	3.1%
Building Permits	42.2%	-12.4%	51.4%	24.3%	14.8%
Blacksburg	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-0.3%	0.9%	2.7%	3.7%	1.8%
Wages and Salaries*	3.3%	3.0%	4.7%	5.3%	5.0%
Real Retail Sales	1.7%	0.6%	1.9%	2.7%	2.1%
Building Permits	41.9%	-16.0%	32.3%	9.6%	6.5%
Winchester	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	1.8%	1.2%	3.2%	3.4%	3.1%
Wages and Salaries*	5.5%	3.2%	4.8%	6.4%	6.7%
Real Retail Sales	3.5%	5.1%	13.2%	4.0%	6.4%
Building Permits	32.6%	-3.2%	22.2%	19.8%	12.6%
Non-MSAs	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-3.5%	6.6%	2.9%	3.2%	1.9%
Wages and Salaries*	-1.1%	2.6%	5.3%	7.3%	4.9%
Real Retail Sales	1.2%	2.5%	5.1%	1.9%	3.0%
Building Permits	12.9%	14.9%	15.0%	7.3%	4.3%
VA-Totals	**2002**	**2003**	**2004**	**2005**	**2006**
Total Nonagricultural Employment	-0.7%	0.3%	2.5%	2.2%	2.0%
Wages and Salaries*	0.3%	3.9%	7.2%	7.4%	6.1%
Real Retail Sales	-0.3%	4.4%	6.9%	4.8%	4.7%
Building Permits	11.9%	2.0%	4.3%	0.1%	-2.9%

*Wages and salaries include some options that were exercised. Actual data are through 2nd quarter 2004.

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Dr. Robert F. Turner: Law professor at the University of Virginia at Charlottesville.

Robert W. Woltz, Jr: President and CEO of Verizon-Virginia.

(*Mrs. Bowen is on a leave of absence during her tenure with Governor Warner.)

"...a wise and frugal government, which shall restrain men from injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement, and shall not take from the mouth of labor the bread it has earned. This is the sum of good government, and this is necessary to close the circle of our felicities."

—Thomas Jefferson, 1801

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